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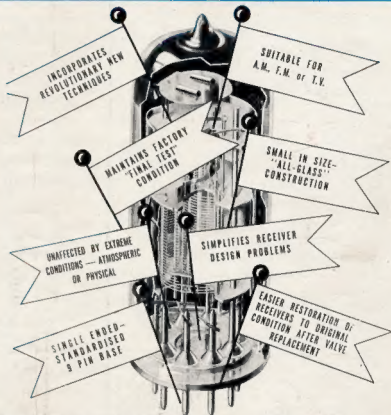
# Amateur Radio

For the Experimenter  
Radio Enthusiast



9<sub>D</sub>.

Registered at the G.P.O., Melbourne, for  
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# AMATEUR RADIO

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## EDITORIAL



As you read this editorial the 21st Annual Federal Convention of the Institute, held over the Easter holidays, has come to an end and with it the completion of a year's work by the Federal Council on your behalf.

During the year much has been done to better Amateur Radio as a whole, a condition for which Federal Council is always working and striving while you continue to enjoy your hobby.

Little can be achieved, however, without the co-operation of the Divisional officers and members, and the fact that your support has been given is self evident in many respects, though, like any other organisation, there unfortunately are members who are prepared to sit by and let others do the work whilst they contribute little.

Today, as is only too evident, some commercial and foreign interests are using our bands without let or hindrance, and this constitutes an encroachment which will gradually engulf us if we are not united in strength, and capable of developing a policy to effectively combat this interference.

To be united in strength indicates we must ALL do our share in increasing the power of tenure which we hold over our frequency bands by International agreement—an agreement brought about by the very fact that the Amateurs pioneered the shortwave bands which today give to the world its rapid communication facilities, and by right of such work they were awarded a "voice" at International Conferences to preserve their hard won ground.

For two decades or more they have preserved these privileges against what could have been overwhelming forces, had they not united to combat the influences that would take away their rights.

Within our own Institute—and indeed in all other kindred societies throughout the world—the Amateur must unite to preserve his identity. In Australia we are in the fortunate position of having a Government Department that appreciates the value of the Amateur in the general field of electronics, particularly in times of war and peace, and in many other allied technical communal facilities. As a body we are recognised, and should so continue to be recognised, to obviate any possibility of losing our identity, and thereby perhaps, our rights. Therefore, we must unite and expand at the same time.

United in policy means we must ALL work for the same thing—our very much prized and privileged hobby. Our policy must be to expand; and to do this we must have membership, for with expanded membership we can have a greater influence to protect our interests. If we cannot speak as a body we will not be heard, therefore we must all encourage new members. We must constantly drive home to the Amateur who is not a member that his voice will not be heard, that irrespective of personal prejudices and feelings regarding what the Institute can give him he should be a member. The future is precarious and one powerful "voice" is going to do a lot more than hundreds of wandering echoes.

If you think we are fooling or talking idly then take time off to listen on the bands, and note the trends of international events!

If you want your hobby to continue strongly, we recommend you to be guided by what we say. Your Federal Council for the next year is going to work hard and strive for you again. Do all you can to encourage them and so make their work effective.

—FEDERAL EXECUTIVE.

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# Homecraft

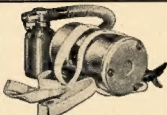
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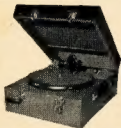


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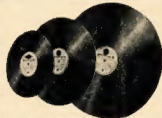


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## EMERGENCY-PORTABLE BIG

## Fifteen Watt 80 Metre Transmitter Designed For Emergency, Portable Or Mobile Use

Several features of any portable or emergency rig are almost mandatory. These are small size and low over-all drain. Other no less desirable features are a self-contained variable frequency oscillator and a final tube capable of as high an output power as is consistent with the primary power source.

It is also desirable that the transmitter be simple and use as few parts as possible, so that servicing is easy and the parts replacement problem simple.

Insofar as possible, all of the above points have been considered in the design of the Emergency-Portable Rig.

## ELECTRICAL DETAILS

Refer to the circuit diagram, Fig. 2. The transmitter consists of a 6AK6 v.f.o. and a 2E26 final. A voltage regulator tube is also included.

The oscillator operates on the 160 metre band. Some measure of isolation is achieved by doing this, and ample power output is obtained to drive the final, even though the oscillator is doubling.

The 6AK6 tube was chosen for the oscillator because of several desirable features. This tube has a separate suppressor which may be connected directly to ground. If the suppressor grid were connected internally to the cathode, it is true with most miniature pentodes, extra coupling between the grid and plate circuits would exist which would materially affect the grid-plate isolation. This coupling is easily avoided by using a tube with a separate suppressor grid.

Further, the 6AK6 is a well-shielded tube and will handle a fair amount of power—at least sufficient power output is obtainable to drive most low-power pentodes or beam-power tubes.

The choice of the tube for the final stage was a little more difficult to make. Many things had to be considered, such as cost, size, availability and performance. Perhaps the one thing that decided in favor of the 2E26 was the ease with which this tube can be made to operate properly.

Compared to receiving tubes, such as the 6V8, the 2E26 has a low grid to plate capacity. This means that the circuit need not be tricky in order to avoid undesirable touchiness. From this standpoint the 2E26 is well worth the small extra cost involved.

The plate circuit of the final may seem unduly cluttered until you realise that an antenna matching network has been included in the design. This is the usual sort of pi coupling arrangement which in this case has been designed for fifty ohm output.

Use of a coupler of this sort tends to eliminate spurious radiations and brings to a minimum the possibility of producing interference.

The pi network shown is not tunable in the normal sense of the word. Coil L3 is actually the plate tank coil for the 2E26 stage. Tuning procedure will be explained later. As shown the output matches directly to 52 ohm co-axial cable which in turn must be matched to the antenna.

Following on the Modulator and Antenna System described in the last issue, we now publish, from "Ham News," March-April, 1950, the RF portion to complete the emergency-portable station.

This 15 watt rig of three tubes—one a voltage regulator—has a self contained v.f.o., is compact and light in weight. The Modulator, mentioned above, together with the E-P Rig can be powered by a 100 Ma. vibrator power supply.

Other types of coupling, such as link coupling, could be employed. For example, to use link coupling, merely eliminate C11 and R3 and connect the right-hand end of coil L3 to ground. The link is then placed around the ground end of the plate coil L3.

### VOLTAGE REGULATION

A great deal of care was taken, design-wise, to ensure that the oscillator would give a clean keyed signal. There is no excuse for a chirpy signal, even from a reg designed primarily for emergency use. This dictated the use of a voltage regulator tube which provides 150 volts to the oscillator and the screen of the final. The additional current drain is still within our prescribed limits.

## SLUG TUNING

Iron slug tuning coils are a perfect solution for interstage and final tuning elements in the E-P Rig. At the power levels encountered there is no loss problem and the tuning range achievable is more than adequate.

Variable condensers might allow slightly higher Q circuits to be obtained. However, the slight betterment of performance which might be obtained in this manner would not justify the extra

cost and the extra space which would have to be made available.

In a transmitter of this sort rapid frequency changing from one end of the band to the other is not necessary, although it is possible, using slug tuning, to move a hundred kilocycles or so without retuning the coils.

For large changes in frequency it will be necessary to adjust L2 and L3 to resonance.

### E.C.O. VERSUS "CLAPP"

The excellence and popularity of the "Clapp" oscillator circuit might lead some people to ask why it was not employed in the Emergency-Portable Rig. This circuit was seriously considered, but several reasons caused it to be discarded in favor of the e.c.o. circuit.

In order to take full advantage of the "Clapp" oscillator circuit it is necessary to use a high Q, high inductance coil in the grid circuit. For operation on 160 metres this sort of coil becomes unwieldy and large. To do the job properly would require a coil approximately two inches in diameter and two inches long—that is, a so-called fifty watt coil. This is obviously impractical in a four by five by six inch cabinet.

Other considerations make the e.c.o. circuit ultimately practical. It is relatively tolerant of changes of the circuit components. It is a simple circuit with which most Amateurs are familiar—no slight consideration if true emergency work has to be done.

These and other factors led to the choice of the electron-coupled circuit for use as the v.f.o.

## CONSTRUCTIONAL DETAILS

The entire transmitter is housed in a four by five by six inch utility box. One of the removable sides serves as the front panel. It will be necessary to bend a chassis out of one-sixteenth inch aluminum or sheet metal. The top of the chassis measures 5½ inches by 3 inches. One flange is bent down 1½ inches and the other is bent down one-half inch.

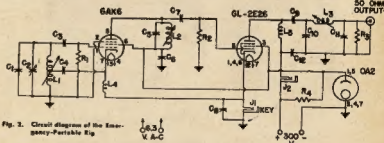


Fig. 3. Circuit diagram of the Emergency-Variable Resistor

- C1—400 pF. silver mica.  
C2—100 pF. variable.  
C3, C5, C10—100 pF. silver mica.  
C4, C6, C12—0.002  $\mu$ F. 500 volt.  
C7, C11—100 pF. mica.  
C8—0.005  $\mu$ F. 500 volt.  
C9—0.001  $\mu$ F. mica.

- J1, J2—Closed circuit jack.  
L1, L2, L3—8 turns No. 28 enamel wire  
on  $\frac{1}{2}$  inch diameter coil former.  
L4, L5—2.5 millihenry r.f. choke.  
R1—0.1 meg.,  $\frac{1}{2}$  watt.  
R2—20,000 ohm,  $\frac{1}{2}$  watt.  
R3—5,000 ohm,  $\frac{1}{2}$  watt.  
R4—5,000 ohm, 5 watt.



The one-half inch flange mounts against the front panel at a height which allows the rear flange to extend down so that it is in line with the bottom edge of the front panel.

The dial mounts on the upper left portion of the front panel. The co-axial connector for the 50 ohm output is at the upper right and the two jacks are mounted at the bottom, one at the left and the other at the right. A rubber grommet is placed in the lower right-hand corner of the front panel. The two filament leads and the two 300 volt leads are cabled and run through this grommet.

Fig. 3 gives the details of parts mounting. Note that coils L1 and L2 are mounted under the chassis and coil L3 is mounted at the back of the 2E26 on top of the chassis. Components mounted above chassis, aside from the tubes, are C2, L3, L5, C9, C10, C11 and R3.

As is evident it will be necessary to remove part of the flange on the box in order to clear parts mounted on the chassis. It is also necessary to drill two holes in the other removable side for tuning L1 and L2 and a hole must be drilled in the bottom of the box so that L3 may be tuned.

One particular point of interest in the wiring can be seen clearly in Fig. 3. Co-axial cable (small size) is used to make the connection between the top of coil L1 and the stator of C2. The co-ax is grounded at the point where it comes through the chassis. The inner conductor connects to the stator of C2.

If ordinary, unshielded wire were used for this connection, mechanical shock would cause the wire to move and the result would be a minor variation in the stator to ground capacity of C2. Using co-ax permits thorough shielding

and gives a minimum frequency change due to the connection being moved.

Component part placement is not critical. As a matter of fact, the mechanical layout shown in the photograph could probably be improved if the 6AK6 and the OA2 were interchanged in position, so that the 6AK6 was between the 2E26 and the OA2.

#### CRITICAL COMPONENTS

For best operation of the circuit, C1, C2, C5, C7, C10 and C11 should be as close as possible to the specified value. Silvered-mica condensers are recommended for C1, C3, C5, C10 and C11. The remainder of the condensers are used for blocking or by-passing purposes and are not critical although the values specified should be used if possible. The ceramic high-capacity condensers will save space if employed as C4, C6, C8, C9 and C12.

The thirty-eight turns of wire specified for coils L1, L2 and L3 should just fill the coil form with a one-layer winding. No pruning of coils should be necessary if the layout shown is followed.

Resistor R4 should be of a value which will not allow more than 30 Ma. through the OA2 or VR150 tube when the keying jack is open.

#### V.F.O. COVERAGE

Any small 100 pF. condenser should serve for the oscillator grid tuning condenser. If the oscillator frequency is set at 3.5 megacycles with C2 at maximum capacity, the frequency will be 3910 kilocycles when C2 is tuned to minimum capacity.

This slightly restricted tuning range can be used to advantage, however. If the bottom end of the range is set at

approximately 3500 kilocycles, then the top of the range will be just outside the high frequency end of the band. In this way you will be fairly certain to stay inside the band under all conditions. Remember, there may be no frequency standard available in an emergency.

#### TUNE-UP ADJUSTMENTS

Remove the E-P Rig from its case and remove the 2E26 tube. Apply filament and plate voltage. Adjust L1 until the 6AK6 is oscillating at the proper frequency. Tune L2 to resonance by a pick-up loop and a flashlight bulb, or a neon bulb. A meter plugged into the keying jack should read a current of approximately fifteen mls.

Replace the 2E26 in its socket. Short the 50 ohm output connector. (This effectively causes the final to be completely unloaded.) Apply plate voltage and tune L3 to resonance by noting the dip in plate current.

The rig should now be tuned to the frequency of the e.c.o. Open the keying jack and measure the current flowing through the OA2. This should not exceed 30 mls. Adjust R4 if it does. Close the key. The OA2 current should be five mls or greater. As a double check on this, make certain that the voltage on the 2E26 screen is 150 volts.

Remove the short from the 50 ohm output connector, place a matched 50 ohm feeder on the output jack, and you are on the air.

— . . . —

#### CLEANING LITZ WIRE

It is important when using Litz wire, that none of the fine individual strands be broken when making a connection and that each strand be cleaned of enamel so that it may be soldered.

The quickest and easiest method to accomplish this is to heat the end of the wire red hot and then plunge the red hot end into an alcohol bath. This method is superior to using fine sandpaper as there is practically no risk of breaking wires and they are cleaned and ready for solder.—"QST" Jan., 1951.

#### A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 12th April, 1951. Morse and Regulations are held on Monday and Theory on Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with the Secretary W.I.A., Victorian Division, 191 Queen Street, Melbourne (Phone FJ 6997 from 10 a.m. to 4 p.m.), or the Class Manager on either of the above evenings.

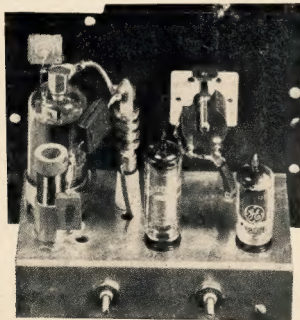


Fig. 3.—Rear view of the Emergency-Portable Rig. Note the two slug-tuned coils mounted on the rear apron. Coil L2 is on the left; coil L1 is on the right.

## A Simple Modulation Monitor

BY C. A. CULLINAN,\* VK7XW

Amateurs who visit the transmitting station of broadcasting station 7EX always express intense interest in the continuously operating modulation monitor.

This rather intricate instrument enables the station engineers to have available, all the time, a meter which reads the modulation percentage of the station, together with a warning lamp which will light up whenever any predetermined modulation percentage is reached.

In the United States all broadcasting stations must use a modulation monitor of this type and it has to meet very stringent specifications. Here in Australia, all the better stations use such monitors and a visit to one of them will amply repay any Ham who is interested in the matter of his modulation.

The meter normally used consists of a linear diode driving a vacuum tube voltmeter having special characteristics to indicate peaks of modulation rapidly. Means are provided to enable both positive and negative peaks to be measured to determine the symmetry of modulation of the transmitter.

The linear diode also feeds a thyatron tube which in turn controls a brilliant lamp. A control, calibrated in percent modulation, is provided to adjust the point of which the thyatron will fire so the lamp can be made to flash at any desired modulation percentage.

Such a modulation meter is a rather expensive item for the Ham to construct, whilst its calibration can prove a difficult job. However, with the recent release of stocks of British and A.W.A. crystal diodes in Australia the situation has rapidly changed where the Ham is concerned.

Now, with a handful of parts, he can easily construct a suitable modulation monitor at reasonable cost and little difficulty.

The circuit diagram shows that the meter consists of two crystal diodes, the first of which is used to rectify the carrier. The second diode is fed via a reversed 3-1 interstage audio frequency transformer and rectifies the audio envelope to provide current to operate the indicating meter. The condenser across the secondary of the transformer stores audio energy to enable the meter to read average modulation rather than peak.

● The switch enables the modulation monitor to read either positive or negative modulation as well as the reference carrier level on the one milliammeter.

For those millionaires who want to do the job the expensive way, a separate meter can be used for carrier reference as the broadcasters do it.

The meter should be one with a fast action, otherwise it will be too slow and permit a far greater modulation percentage in the transmitter than appears apparent. In this regard some experimenting with the condenser across the output of the audio frequency transformer may be in order.

## CALIBRATION

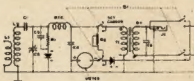
Calibration is frequently the bug-bear of most constructors of home-made test equipment, but in this case every endeavour has been made to simplify calibration as much as possible.

(a) Divide the meter scale into five equal parts, then sub-divide each of the first (left-hand) four major parts into five equal parts. A long line is drawn through the major divisions and marked as shown. Note that the 100% position is marked as "set carrier". Here a VK7XW Triplett model 321 0.1-c.milliammeter was used with the major scale divisions at 0.2, 0.4, 0.6, 0.8, and 1.0 on the original meter scale. This meter has an internal resistance of 33 ohms and the purpose of resistor R2 is to enable the above scale to read correctly.

Actually any other 0-1 Ma. meter can be used if R2 is properly adjusted. R2 is a screwdriver adjusted potentiometer.

(b) With the switch in the "carrier" position, tune in your transmitter without modulation and adjust the coupling to the transmitter so that the milliammeter reads 100 ("set carrier"). This establishes a reference level which must always be used or the rest of the monitor will give incorrect results.

Next switch over to "positive" and apply tone to the transmitter. Use a scope to determine 100% modulation, then adjust R2 so that the milliammeter reads 100. Re-adjust the "set carrier" if necessary. The modulation monitor



Note reversed connection of audio transformer, also headphone jack for audible monitoring. This cuts out the meter on percentage readings.

- C1—0.001  $\mu$ F. mica condenser.  
C2—50 pF. variable condenser.  
C3—10 pF. mica condenser.  
C4—0.0003  $\mu$ F. mica condenser.  
C5—0.02  $\mu$ F. 200 volt paper condenser.  
J1—Single circuit closed jack.  
M—0-1 Ma. d.c. milliammeter.  
R1—1000 ohms  $\frac{1}{2}$  watt carbon resistor.  
R2—15000 ohm w.w. potentiometer.  
RFC—2.5 mhy. r.f. choke.  
Rectifiers—each 1N34 or GEX44 crystal diodes.  
S1—4 pole 3 position wafer switch.  
T1—3-1 audio frequency transformer.

## Cell Data:

	L1	L2			
80 metre	6 t.	35 turns	22	B/S enamel.	
40	4 t.	15	20		
20	3 t.	7	18		
10	2 t.	4	16		

All coils wound on  $1\frac{1}{2}$ " formers with L1 at ground end of L2. Also, all coils are close wound except the 10 metre which is spaced to one inch.

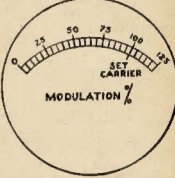
is now calibrated and will read correctly on all points provided the "set carrier" reference is always maintained.

It may be found that the carrier reference has changed when R2 is adjusted, in which case the transmitter coupling must be re-adjusted to give the correct carrier reference.

If the transmitter is reasonably linear and does not suffer from carrier shift, caused by poor power supply regulation, etc., it is possible to calibrate the meter without a scope.

To do this, set the "carrier" reference as before without modulation, then gradually apply a single tone. At the point of 100% modulation the milliammeter (in "carrier" position) will change. Now switch to positive modulation and see if the meter reads 100%. If not alter R2, also re-checking the carrier level until the meter kick corresponds with 100% modulation on the meter.

However, this method will not be exact if the meter in the "carrier" reference position changes for any reason than reaching 100% modulation of the transmitter.



Meter Scale

The monitor should normally be used in the negative position.

If it is found that there is a discrepancy, after calibration is completed, between positive and negative, this will usually indicate a symmetrical modulation—a condition which should be corrected in the transmitter.

In use, in the Ham shack, care must be taken to learn to use the monitor correctly because the percentage of modulation, as read on speech, will be different to that obtained on tone. In general it can be assumed that a reading of 75% will be equivalent to an actual 100%. This is because of the dynamic characteristics of the meter movement will not permit instantaneous readings, and in any case if the meter could do this then the eye could not follow the pointer. It is for this latter reason that the F.C.C. in the U.S. will not allow the use of cathode ray oscillographs for broadcast station monitoring in

Now that you have read this, if you haven't already seen one in action, take a trip to your nearest broadcast station and find out if they have a modulation monitor. If so, see it in action and you will soon want one like this, for yourself.

## Metering Transmitters

Here is a tip applicable to those 0-15 ampere (American made) RF Meters, where use for RF purposes is not required. Some quantity of these has been available from disposals.

A reasonably small diameter meter case (2-3/16") and a robust movement with adequate damping, makes it worthwhile converting for measurement of DC in transmitters. The unit is basically a moving coil type with an internal thermocouple. The full scale deflection of the movement varies somewhat from meter to meter, being about 12 to 15 Ma.

The meter is gently withdrawn from the case, then the scale plate is unscrewed and put aside. This gives access to the thermocouple which is removed, without disconnecting the two insulated leads. These leads are then bared back a little and soldered one to each terminal plate, thus connecting the moving coil to the terminals.

The original calibrations and any unrequired printing are carefully removed from the scale plate using a razor blade and rubber. With care, the white background will not be unduly damaged. Any suitable calibration may now be applied with Indian ink and drawing instruments.

After re-assembly, an external shunt (or shunts) is made and adjusted to suit the calibration, using some type of standard meter for checking purposes.

As examples, three of these RF Meters have been modified for the home transmitter: 0-20 Ma., 0-300 Ma., and the third as a switched multi-range unit for the low power stages.—VK3ABA, 80 Shannon St., Box Hill Nth., E.12, Victoria.

## SUBSCRIPTIONS

● Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.

## PCJ, HOLLAND, CHANGES PROGRAMME SCHEDULE

We have received from Philips Electrical Industries of Australia Pty. Ltd. notification of a change in the programme schedules of Station PCJ, Holland, for the East and the Pacific Area as from 1st March.

Special Pacific Area programmes from this station are now being transmitted on Sundays only (instead of Sunday, Wednesday and Tuesday as previously) from 10.30-12.00 GMT, on 13, 16, 19 and 49 metres.

## ABSTRACTS FROM OVERSEAS MAGAZINES

R.S.G.B. "BULLETIN," SEPTEMBER, 1956

Page 56: "Panoramic Reception, Part I. Fundamentals."—Excellent introduction to this subject by G.P.J.D. The author traces the history, application and fundamental considerations of the system.

Page 54: "Etching of Quartz Crystals."—Contains full details of an alternative frequency-shifting system which is comparatively little known and which possesses many important advantages.

R.S.G.B. "BULLETIN," OCTOBER, 1956

Page 122: "Panoramic Reception, Part II."—Continuation from Sept. issue. A circuit of a Panoramic Converter for the 144-148 Mc. band being fully described and circuit diagrams discussed.

Page 130: "Further Notes on T.V.I."—Transmitter design: interferences from fundamental radiation and causes of same discussed.

Page 135: "Beam Tetrodes used as H.F. Amplifiers."—Covers neutralization of beam tetrodes and the use of the cathode follower.

R.S.G.B. "BULLETIN," NOVEMBER, 1956

Page 166: "Filters for Speech Clipping."—Practical explanation of how to design and build suitable efficient low-pass filters, as well as full information on the results which may be expected.

Page 166: "All-Band Grip Dip Oscillator."—Constructional article. Full details, circuit diagrams and photographs.

## DOUBLE CHANGE SUPERHETS

If considering a crystal controlled oscillator for the second mixer, I suggest 2333.3 Kc., with the i.f. frequencies 1868.3 Kc. and 455 Kc. Multiples of the third harmonic of this crystal will give band edge markers at 7, 14, 28 Mc. Commercial 1900 Kc. i.f. transformers will tune to 1868 Kc. with ease—VK6EC.

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- 150 MA. POWER SUPPLY—TRANSFORMER £8-12-6  
AND TWO CHOKES inc. tax  
PT1356-1 Power Transformer, 400v.-CT-400v., 5v. at 3a., two 6.3v. at 2a., 2.5v. at 5a. inc. tax £3-10-0.  
Z967-1 Filter Choke, 35 Henries maximum, 20 Henries at full rated DC inc. tax £2-11-3.
- 200 MA. POWER SUPPLY—TRANSFORMER £10-8-6  
AND TWO CHOKES inc. tax  
PT1380-1 Power Transformer, 450v.-CT-450v., two 8.3v. at 2a., 5v. at 3a. inc. tax £4-4-0.  
The PT1352-1 250 Ma. Transformer (500v.-CT-500v.) could be used in this power supply if higher voltage is required. inc. tax £4-8-11.  
Z956-1 Filter Choke, 30 Henries maximum, 20 Henries at full rated DC inc. tax £3-4-9.  
Z962-1 Swinging Choke, 30 Henries maximum, 25-5 Henries at full rated DC, swing from 20 to 200 Ma., inc. tax £2-19-10.
- 300 MA. POWER SUPPLY—TRANSFORMER £13-12-6  
AND TWO CHOKES inc. tax  
PT1371-8 Power Transformer, 1000v.-CT-1000v., 850v.-850v., 750v.-750v., 600v.-600v., 500v.-500v., inc. tax £7-0-10.  
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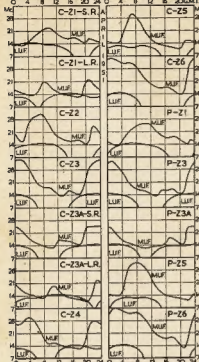
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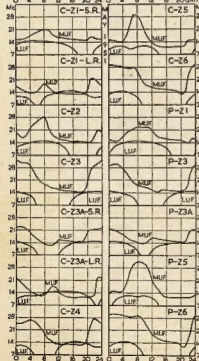
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# IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS



# IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS



# IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

APRIL, 1951

The accompanying charts have been prepared by the Ionospheric Prediction Service of the Commonwealth Observatory. The first set of the series was published in the November, 1949, issue of this magazine, together with an article explaining the nature of the forecasts and how to use them. Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:

Zone	Region	Terminal
1.	Western Europe	London
2.	Mediterranean	Cairo
3a.	N-West America	San Francisco
3b.	N-East America	New York
4.	Central America	Barbados
5.	South Africa	Capetown
6.	Far East	Manila

The forecasts have actually been prepared for point-to-point circuits between Canberra and the overseas terminals mentioned in the above table. It is, however, to be expected that the charts will provide an approximate indication of ionospheric conditions for all Amateur contacts from South Eastern Australia to the various world zones.

The Perth charts are similar to those based on Canberra. No forecasts are given from Perth to Zones 23 and 24 for the current months, as chart P-23 would be essentially similar to chart P-21, while chart P-24 might be unreliable due to auroral activity in high northern latitudes.

## USE OF CHARTS

All that is necessary in using the charts is to select a time (G.M.T.) during which a specified Amateur band frequency is below the maximum usable frequency (M.U.F.) of the F region of the ionosphere but above the lowest useful frequency (L.U.F.) for the desired contact. In two cases, Zones 1 and 3a, it is necessary to consult both the short-route (S.R.) chart and the following long-route (L.R.) chart.

## QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:

1. Were good conditions experienced on 7 Mc. for the period 0600 to 1500 hours G.M.T.?
2. Was the 14 Mc. band workable between 1200 and 1800 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the month.

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# ALTERATIONS AND DELETIONS TO AMATEUR CALL SIGNS

December, 1950, and January, 1951

## VKS—ALTERATIONS New South Wales

- 2CJ—8th Ave., Sawtell.
- 2EL—c/o Mr. R. I. K. Clarke, 78 Fricourt Ave., Earlwood.
- 2FX—88 Carrington St., Mayfield East.
- 2FZ—32 Westworth St., Lakemba.
- 2ZG—123 Hume Highway, Yagoona.
- 2JQ—The Rectory, Junc.
- 2NG—16 Albert St., Leichhardt.
- 2OW—Lot 210 Bowden Boulevard, Yagoona.
- 2VM—31 Abbott Rd., Artarmon.
- 2VW—36 Wilson St., Maroubra.
- 2AAR—c/o Dept. of Civil Aviation, Coff's Harbour (Grt. Aerodrome).
- 2AAS—17 Brook St., Murrumbidgee.
- 2AC—32 Watson Cres., Abbotsford.
- 2AEB—115 Commerce St., Taree.
- 2AOB—Sherlock Ave., Penzance.
- 2AP—13 Havelock St., Chastwood.
- 2AT—21 Allayne Ave., North Narrabeen.

## Victoria

- 3CO—30 Garden Vale Rd., South Caulfield.
- 3DS—108 Cardigan St., Ballarat.
- 3NC—Flagstaff Hill, Casterton.
- 3NG—15 Como Ave., South Yarra.
- 3NW—12 Kendal Gr., Glen Iris.
- 3PB—7 James St., Box Hill.
- 3PL—328 Huff Rd., Sandringham.
- 3QJ—Churchill Island, Newhaven.
- 3SD—4 Wyuna St., West Brunswick.
- 3SM—28 Reynolds Pde., Paece Vale South.
- 3UJ—Lyndale Rd., Ringwood East.
- 3US—15 Hassett St., Leongatha.
- 3VL—15 Hassett St., Leongatha.
- 3YE—115A Bamba Rd., Caulfield.
- 3YQ—108 Nixon St., Nepperton.
- 3AKA—42 George St., Oakleigh.
- 3ANI—15 White St., Coburg.
- 3ANW—4 Kendal Gr., Glen Iris.
- 3AOK—377 Dandenong Rd., Malvern.
- 3ASC—88 Begonia Rd., Gardenvale, S.4.
- 3AWN—34 Park St., Parkville.

## Queensland

- 4EF—13 Griffen St., Mackay.
- 4ES—Radio Station, Cleveken, via Townsville.
- 4EE—49 Gerler St., Rainworth.
- 4GE—Flemington St., Kendera.
- 4KO—3 Brisbane Rd., Bowral.
- 4PO—Old Cleveland Rd., Belmont.
- 4XG—McCormack Ave., Oakleigh.

## South Australia

- 5FD—Amor St., Mount Gambier.
- 5FL—15 Denning St., Hawthorn.
- 5KL—39 Turnbull Rd., Enfield Heights.
- 5LK—147 Napier Ter., Westbourne Park.
- 5LX—147 Napier Ter., Westbourne Park.
- 5NB—328 Brighton Rd., Hove.

## Western Australia

- 6VM—22 Cross St., Swanbourne.

## Tasmania

- 7JT—33 Ashwater Cres., Penguin.

## VKS—DELETIONS New South Wales

- 2IA—Cancelled.
- 2JAS—Cancelled.

## Victoria

- 2RF—Cancelled.
- 3WL—Cancelled.
- 3XE—Cancelled. Operating under VK8XE approx. 2 years; VK8XE reserved for return as requested.
- 3YQ—Cancelled. now operating under VK8ED.
- 3AGM—Cancelled.

## Queensland

- 4HC—Cancelled.
- 4KI—Cancelled.
- 4KV—Cancelled. now operating under VK8AVC.
- 4LB—Cancelled.
- 4MR—Cancelled. now operating under VK8MR.
- 4RU—Cancelled. now operating under VK8ARI.

**BUY YOUR DX FRIEND A YEARLY SUBSCRIPTION TO "AMATEUR RADIO"**

# FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

Donna-Buang: 32L/GM, Mr. Buninyong: 3AKE/VF, Barrabool, while 3UT at Tatura and 3AFP, 3AT, 3H2, all at Shepparton will be looking for contacts on 50 and 144 Mc. 3ZL and 3AKE will also have 288 and 576 Mc. gear and will be anxious for contacts on these bands.

Other stations intending to operate portable on 350 Mc. are asking for more information so that it may be included in the 3WI broadcasts. It has also been suggested that any portable stations on 350 Mc. should be paused along on 7.1 Mc. at 6000 hours. 3AJI will be pleased to collect same and will pass on the information to the broad and narrow stations are asked to pass on details of transmitting and/or listening times, not only for field days, but for any other times which may be convenient, so that of portable reception could send them on to 3WI after the Sunday broadcast.

Power blackouts in VKI have thwarted the efforts of 7KB, 7AB and 3XA to keep daily skeds on 144 Mc. conditions also do not appear to have been so good since the break in the weather. TPF is not in Melbourne and may be here permanently. Welcome, Peter, and let us hope we can soon hear your voice on the air. Don't forget to send in your field day logs.

## SOUTH AUSTRALIA

Activity mainly centred on 144 Mc. for the month although activity was also wanted on 50 Mc. Had a number of SBC with news of activity in the River districts ("Pansy" Parsons note what advertising will do!). 144 Mc. gang also had a number of contacts on 144 Mc. during March. Early mornings are the best time to try for 144 Mc. DX as experience from Adelaide and Melbourne has shown. One morning recently, 5 x 5 contacts between Adelaide, Melbourne and Nulli ground to ground continued up to 10.35 a.m. The early morning cannot be stressed too much and concentrated on. Best days are when the conversion is down low, this must create a duct in which the signal travels. The best time for this is between midnight and dawn onwards, all efforts should be made then.

Those who thought the 50 Mc. DX waned at the end of January were misled out on some good openings. SBC reports 212s on 1st February and 51D QSOed 212BJ on 14th February. The response to the 144 Mc. DX to SBC and 5MA requesting for the last hour.

SMD has his ground plane outdoors and signal is much healthier. Rumours of building crystal converter. SMD at W.I.A. meeting should give flip to v.h.f. activity. Practical demonstration was perfect ending to an interesting lecture. Well done to SMD for his signal. SMD is now going to a 534 with zero bias 607 modulators. 5MA is using converted 1133 at present, but a new chassis has appeared. SMD has been back from Fred later. Reports of a female voice background in your phone, words such as preserving, garden, washing, pulling fuses. Hard to catch but Fred is very Dear. He worked SGF when at Mt. Barker.

SKW using 815 and 40 watts input to a dipole. SFM heard remarking on 50 Mc. he had had the band because of too much noise. It's marvelous how much is in some receivers. Ron's limiters do help. SAK been QSO SKL on 80 Mc. and also testing with 5QR on 144 Mc. 8FY recent in Gawler with 2A51E and 3A2, getting 242J going. On 15th April there is to be a general v.h.f. field day with bonus points for 576 Mc. contacts. The final arrangements will be made and locations about the v.h.f. section meeting at Science House on 6th April and details will be given over 2WI on 6th April. It looks as though there will be at least eight parties with 576 Mc. portable gear. The s.w. corner gang will be equipped with gear for 50, 144, 288 and 576 Mc. bands and are going to make a week-end jaunt to a high spot. Field day arrangements are in charge of 2ANF, 2WJ and 2YM.

2Y is experimenting with a crystal dodec mixer and hopes to build up a simple converter for the band. Several ASDBs are in circulation and need to be used and it must be rather hard to let them go. Acknowledgments to VKs 3QZ, 3JO and SKL for the above material.

These brief notes are indicative of the restricted activity on the v.h.f. bands, particularly 50 Mc. now that the DX season has passed. We can only assume that the lack of activity is brought about by intensive overhaul and rebuilding programmes by the 50 Mc. devotees. Friends of VK3AII will be very sorry to learn of his sudden illness. Eric was admitted to the Mornington Hospital about a month ago after a heart attack, but is now convalescing at home and is reported to be coming along nicely. We sincerely hope that it will not be long before Eric's cheery voice is heard once more on 50 Mc.

## 50 MC. ACTIVITY

### NEW SOUTH WALES

With the passing of the DX this band has become very quiet. It seems to be the time for pulling down beams and scraping off the barometers. 2XX found his folded dipole driven element had open-circuited and 2AH was surprised at the amount of oxidation which can occur in three years or so.

2ANU, of Muswellbrook, has been able to go QRO to 5-8 watts now that he has a 2BV, house-lighting filament has been working. In Sydney, 2AET has a three element beam which can be rotated by leaning out the window. Rix's signal has come up more than somewhat. 21H of Croydon, came onto the band with e.w., but was soon modulating the 35T final. 3ZL is still using the 28 Mc. beam on this band. 3QZ has his folded dipole on a stick and swings it out over the street; there has been an increase in the signal reports in and out. 256J is building a new modulator. He has had trouble with impure polystyrene in the final's neutralizing condensers.

2ARK at last has a beam functioning, though is inclined to work off the back of it. 2AH back from holidays, works this band with a dipole at the moment. 2YR has been grinding 900 Kc. crystals down to 144 Kc. or so. 31U has 50 ft. mast up and will be putting up an array directed towards Canberra. 2ABC was heard working 8GU with good signals at both ends.

## 144 MC. DOINGS OF THE MONTH

### NEW SOUTH WALES

Two new signals on the band are from 2ATL and 2ACO. 2YR has struck b.c.l. trouble and 2AC crystals down to 144 Kc. or so. 31U has 50 ft. mast up and will be putting up an array directed towards Canberra. 2ABC was heard working 8GU with good signals at both ends.

In a prominent position in 2AH's shack is a card from 21LADK who heard his 144 Mc. signal last month. Alan's converter with p.p. pentode r.f. stage, p.p. mixer and p.p. oscillator is certainly a fitting input for the 32 element

beam. 2XV likes the 12AT7 as mixer-oscillator and is going to try another one as a cascade amplifier. 2ANF has a cascade going and is very well pleased with it. John is sharpening his pencils to take over these notes in April. 2ABC, back from a holiday in VKS and VK3, has been busy teeing up a pack of VK3 144 Mc. stations for an attempt to make intensive contacts in the small hours in mid-March.

## VICTORIAN V.H.F. GROUP NOTES

Please note the Group meeting night—the third Wednesday every month and, if interested in v.h.f. work, do your best to attend. At the February meeting, 18 members including visitors TRL and Magazine Technical Editor (3VZ) spent a very interesting and informative night. There were no field day reports due to the washout on 18th February, but an interesting discussion took place concerning articles for publication in "Amateur Radio." Many group members felt that publication of technical articles on how to build v.h.f. equipment using tubes and parts readily obtainable in Australia would go a long way towards encouraging more activity on the v.h.f. bands.

The slogan, "Populate or Perth," can well be applied to these bands. For his part, the Technical Editor explained that he was only too willing to receive such articles and that he would publish same. There is a wide field to be covered: different types of transmitters, different types of receivers and converters, modulation, a.m. and f.m., frequency measuring and test equipment, antennae, etc. etc. Many group members are doing what they can along these lines and it is hoped that v.h.f. men in other States will also contribute such articles.

Two samples of equipment that could well form the subject of an excellent article were displayed by 3KA. They were the exciter units for his 30 Mc. and 144 Mc. transmitter using 6AS and 823s. There are many TRL144As about and many modifications must have been made by various Hams, so that a number of articles on modifications to this rig, published in much the same manner as were the Type 3 Mark 2 modifications, would be of great value to many who are as yet uncertain as to the best way to make such modifications, due to a general dearth of information about this rig. It was also suggested that reprints of articles from overseas magazines was another way in which the lack of supply of articles may be overcome. Many members read many different magazines, so if you think that a particular article would be useful in our magazine, shoot it along, you might be the only one who has seen it.

The next field day will be on Sunday, 15th April, in the contest, commencing at 1200 hours and ending at 1700 hours. Stations who have notified that they will be portable are 3FO, Arthur's Seat; 3ABA/YE, Mt. Macedon; 3JO/O,

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### CUTTING POLYSTYRENE ROD

February produced even worse conditions than the previous month. 14 Mc was practically useless up here, either for DX or Interstate working. DX usually very weak, if there at all, and Interstate stations would disappear while you listened to them. The only reasonable opening observed here was on 17th February, for a period from 0630-0800 G.M.T., when 8MBAB, ZD4AB, ZD4AE, ZD1BE, DL1FK were heard on 14 Mc., and on 17th February were heard on 15 Mc. Some good DX was heard but very weakly and not workable. They were VP8EL, KG4AO, ZD4AE, and CR3AF.

28 Mc. opened slightly for the first day of the W/V E Contest, west coast stations being workable for an hour or so, but they were very unstable.

1 Mc has shown it can be as erratic as the others. One day in the early morning, the band was OK for DX, the following day, possibly nothing there. On the 22nd and 27th, the band was full of Gs, and they were causing plenty of QRN on the band. It was only for a short time from 2030-2100 G.M.T. HP1T1 mobile marine was worked one morning when he was 750 miles west of the Azores. VQ5CF has been working a good consistent signal the latter part of the month.

The first day of the W/VIE Contest (c.w.) produced fairly good conditions on 7 and 3.5 Mc., but the following night it was very poor. This was also noted by ZLIBY, who worked all W districts on the four bands. Quite a fair performance, with over 800 contacts.

Conditions for the first week-end of the B.E. RU Test were erratic and on the lower bands very noisy here. A peculiar effect was noticed on 1 Mc around 0900 GMT, when only ZL and VK signals could be heard, but they were fuzzy and indistinct. Suddenly, it all cleared up and the VE stations and VP6C/DI came through with good clean signals. 2R Mc was practically useless, only one ZL, one VK and VSI being worked. The VSI called 2RA, but Ray did not hear him I found out later. 14 Mc showed very

erratic behaviour. VK and ZL signals being in and out throughout the day. I replied to a number of ZL CQs, but they did not hear me or anybody else.

On 28 Mr., during the first day of the W/VE Contest, at the same period of the day, the following prefixes were heard, VK2, VK3, VK4, VE, W, JA, KH6, KG6 and ZL. This gives some idea of the way that band was behaving.

I have received no news from the gang this month, so once again, the notes consist of my own observations. It's not very heartening to try and make these of general interest.

Although conditions have been poor and only a few new countries added to the list, 13 new conformations were received, the pickings being: CR9AD, HR1DF, UGCKAB, ZMEAK, 4X4CR, PJ1UF, UB5KAA, ZK3AA, PZ1AL. Others which may interest somebody waiting to see a QSL from them, were: VR1C, FPFJC, CG6WC, WTTT and YU5PLA. One disturbing angle on the QSL situation in the UK is that the number of the OK QSLs these days. One feels like putting them in the w.d.b.

14 Mc. listings for the month are not plentiful, nor were the signals strong, and a good few got away. ZARB, CMAF, CRSA, PMTWF, YBIO, VPBL, KQAA, ZDAA, FOSAG, CPSEK, LXIA, ARSA, ZDAB, ES4AX, N3AB (3) via Molise, Asmara), UMEKAA, APZZ, MPKAW, ZBICH, ZBIBE and ZBJAX. On 7 Mc the following prefixes were heard, again mainly between 2000-2100 GMT: ZSS, VQS, VQS, VQ, ZEI, DL, HB9, CRS, OK, 11, VE1BY, at 2000 GMT, HP11/mm, 5, FAS, G, CM, OW, PA, YU, KPS, CNF, X4, MP4, VPM, VBS, UAG, UAL, UAS, ON.

Quite a few new VK calls appeared on the band this month, they also apparently finding their way to the other side of the world. Some countries worked on the lower bands, to see what rooks. Here, have now raised the 7 Mc score to 43 countries. SKO, what about your score on 3.5 Mc. OM? My activities on 7 Mc look like receiving a severe jolt on present conditions. I have been unable to make any reference at odd times from the local Coastal Radio Station VTT. Measured him as 7000.5 Kc., and the local Radio Inspector tells me that they are allotted the frequency of 7000 Kc. and increased activity is anticipated. You can well imagine what happens to the rest of 7 Mc. When the high powered M.C.W. comes on the air.

JYP has now amassed the fine total of 311 countries, the latest being trapped are EAS, EAB, VTAC. Some of the VKs apparently have been trapped. VTAB, VTAB photo 2400. I've snapped up FQ8AE for a new one whilst 4WJ has been trying to get one more Empire station for his Empire DX C.C. was heard chasing VQ3CF and VP6CDD on 7 Mc. with negative results. 4RW, when last heard had reached the 99 goal, and was ready to fall off the fence into the DX enclosure. Maybe he has. C'en era there. 2AGU has 143 countries chalked up.

The racket of one station doing most of the transmitting and receiving for a third party to "claim" a new country, was heard amongst some of the phone boys this month, even to the extent that they would despatch the third party's QSL. The third party took very little part in the QSO, as the DX station could not read him. It's one way to make DX C.C. any-  
how I **EMPHASIS**

Conditions for April should show an improvement on 14 Mc. between 0630-1000 G.M.T., but little else can be expected here of any stability.

● The thought for the month. "If you are going to enter a DX Contest, check up on the rules first." Some VKs, according to their serial numbers, were using a KW in the W/V/E Contest, whilst another started the B.E.U. Contest at 1700 local time instead of 1700 G.M.T.

When cutting polystyrene rod or tubing into short lengths, as for feeder spreaders, the usual method of hacksawing leaves a rough edge. Further, the sawing must proceed at a snail's pace or the polystyrene will melt, gumming up the saw blade.

Next time try an ordinary tubing cutter, the kind with a circular blade that rolls around the tubing. It will cut either rod or tubing in a fraction of the time required for sawing, and will leave a much neater cut end. If an extra smooth end is desired, the raw cut end may be "fire polished" in the manner of glass tubing by pressing it briefly against the barrel of a hot soldering iron.—"QST," Jan., 1961.

## Low Drift Crystals

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### DX C.C. LISTING

**PHONE**

Call	No. Ctr.	Call	No. Ctr.
VK3JD	1 188	VK4JP	14 114
VK3JE	10 184	VK4JWW	14 112
VK3ER	2 148	VK4WJ	27 104
VK3KW	4 146	VK3ADT	23 102
VK3BZ	3 141	VK3AHA	25 102
VK4KS	9 136	VK4WF	18 101
VK4HR	12 138	VK3QG	18 100
VK5OD	6 138	VK3JO	6 100
VK3LN	11 135	VK3JE	7 100

## CW

Call	No.	City	Call	No.	City
VK3BZ	6	182	VK4DA	7	113
VK3FH	15	158	VK4LE	17	112
VK3GQ	8	154	VK4ZD	23	111
VK3JN	1	153	VK4ZE	18	107
VK4EL	9	150	VK4RC	18	107
VK4QL	5	141	VK5GW	21	107
VK5VA	8	149	VK5FD	27	105
VK5KD	10	143	VK5FH	25	104
VK5SA	100	135	VK3JI	25	104
VK6HR	8	135	VK3YC	34	103
VK6RU	18	120	VK4PJ	20	102
VK7AR	1	118	VK4FA	20	101
VK5EK	3	122	VK3NC	19	101
VK8RX	100	113	VK3CX	36	101
VK4DO	20	117	VK6GA	33	101
VK3UM	23	115	VK5RL	24	100
VK5WK	100	114	VK7LJ	24	100

**OPEN**

[illegible]

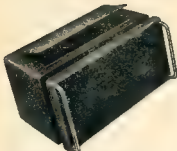
## 50 Mc. W.A.S.

Call	Certificate Number	Additional Countries
VK4RY	8	2
VK2VW	8	2
VK6DW	2	1
VK4HR	4	1
VK0PF	6	1
VK1RR	6	1
VK1AZZ	10	1
VK1LC	1	
VK1BT	1	
VK2ABC	8	

## MAXWELL HOWDEN

**15 CLAREMONT CRES.,  
CANTERBURY, E.7,  
VICTORIA**

# EDDYSTONE CABINET ASSEMBLIES



## CABINET ASSEMBLY

This assembly measures 16½ in. long, 8½ in. high and 9 in. from back to front. It is ideal for the construction of equipment having a professional appearance. The cabinet is fitted with a hinged lid and has ventilating louvers in the sides, rear and top. External finish is fine ripple black, internal smooth black. A chassis to match is included and measures 16 in. long, 7½ in. wide, 3 in. deep. It is fixed to the panel by means of special end plates to which also the cabinet is attached by four screws at the rear. The whole is supplied ready assembled. Chassis (without and plated) is available separately. Cat. No. 187—General Purpose Metal Cabinet, Panel and Chassis.

Cat. No. 188—Replacement Chassis separately.  
Cat. No. 608—Polished Chromium-Plated Handles, per pair

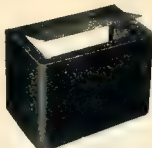


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These chassis are substantial and rigid. They provide a strong foundation for all kinds of equipment, including receivers, power units, RF and AF amplifiers, etc. High mechanical and electrical stability is assured.

Cat. No. 643—Outside dimensions 8½ x 5½ x 2½ in. deep.

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This metal cabinet, of new design, is intended to house the Cat. No. 643 chassis. It is 7 inches high, has a lid in the top and is handsomely finished in ripple black. The rear of the cabinet is left open.

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			Radio Elec. Wholesalers Ltd.	Caryle & Co. Ltd.



# FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WQ); Federal Secretary: G. M. MULL (VK3SS); Box 351W, G.P.O., Melbourne.

## NEW SOUTH WALES

President: J. Corbin, VK3YC.  
Secretary: David H. Duff (VK3ZD), Box 1734 G.P.O., Sydney.  
Meeting Night: Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.  
Divisional Sub-Editor: A. C. Pearce, VK3AKB.  
JIA Bohman Rd., Leichhardt, N.S.W.  
Zone Correspondents: North Coast and Tablelands: J. M. Retallick, VK3KO, Raleigh, Newcastle; B. White, VK3ARA, Vale St., Mirramah Gardens Newcastle; Coalfields & Lakes: R. Hawkins VK3VJ, 27 Comfort Ave., Cessnock Western; W. J. Sutt, VK3WU, Mumbajows, Forbes; North Coast and Southern: R. H. Reiner, VK3DO 42 Pettit St., Yass; Western: J. Ashurst, A. C. Pearce, VK3AIB, JIA Bohman Rd. Leichhardt; Eastern Suburbs: D. R. Knock, VK3NO 43 Yankoo Ave., Waverley; Riverina: D. L. Cuffe, VK3LAL 77 Military Rd., Moama; B. George, J. J. Ackermann, VK3ALG, 32 Park Rd., Carlton, South Sydney; V. H. Wilson, VK3VW, Cr. Wilson St. and Marine Pde., Maroubra.

## VICTORIA

President: G. S. C. Semmens, VK3GS.  
Secretary: C. Dyer (VK3VJ), 18 Collington Ave., Brighton (CA 6286).  
Administrative Secretary: Mrs. S. May, Law Court Chambers, 181 Queen St., Melbourne.  
Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College Zone Correspondents: Western: C. C. Waring, VK3VW, 12 Stone St., Melbourne; North: K. O'Rourke, VK3AKR, Killgrew, Western; North Eastern: T. K. Tennant, c/o Victoria Theatre, Tatura; Far North: M. Felle, VK3CZ, 81 Lemon Ave. Mildura; Eastern: H. O. Kelias, VK3AKR, Traralgon, North Western: C. Case, VK3ACE, Cummins Ave., Epschip.

## FEDERAL

### 1956 VK-ZL DX CONTEST

Due to the laudible desire on the part of the N.Z.A.R.T. and the N.Z. DX Club, White, ZL3GX to have the 1956 results of the VK-ZL International DX Contest out on time, Jack White, the Contest Director, has decided to have the Contest to publish with the results. However, he has now forwarded his comments with an apology for their lateness, together with a few interesting facts as follows:

"Possibly there are a few who are awaiting some comment from me about the Contest—I am sending the results to you. As I am sure all will realize that the number of logs received this year less than for the other two post-war years, in fact the contest results were conducted by the N.Z.A.R.T.—Fed. Sec. 1. This I know can be put down to the almost impossible conditions prevailing on most bands. In view of this, the scores of the winning competitors are all the more creditable and reflect highly the operating ability, tenacity of purpose and the operators as well as the efficiency of their equipment. Many of the overseas logs had postership apologising for the poor score and explaining that VK-ZL signals were simply not audible, and were consequently by their absence."

"With so few logs from overseas, the matter of checking becomes difficult and one has to rely to a great extent on the integrity of the competitor. I had no reason to doubt any entry. In fact the contest was won by a few of our several competitors had duplicate QSOs and there were suitably marked and no points claimed. I was highly worried, makes a plea for the contest logs. Checked logs are a most laborious task which can be made much easier if care is taken in writing up the log." (If the Federation operators adopt the same as a standard, log sheet for contest use it is hoped this difficulty known only too well to F.E. too, will be overcome. Sec. 1. Many were beautifully done. Perhaps it is unfair to mention individuals, but the logs of VKs ZDG 6RU and 6KW come to mind as being perfect. Thanks checkers for using the uniform size of log paper, the ideal being quarto.)

"Contacts made with two overseas stations were not recorded. Sec. 1. Many were beautifully done. Perhaps it is unfair to mention individuals, but the logs of VKs ZDG 6RU and 6KW come to mind as being perfect. Thanks checkers for using the uniform size of log paper, the ideal being quarto.)

"This year the top score went to VK with the second score several places down. It looks as if, in spite of previous protests to the

## WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official broadcasts.

VK3WJ Sundays, 1100 hours EST, 7195 Kc. and 3000 hours EST 50 and 144 Mc. No frequency checks available from VK3WJ, Intra-State working frequency, 7175 Kc.

VK3WJ Sundays, 1130 hours EST, simultaneously on 3500 and 7195 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7195 Kc. Individual frequency checks of Amateur Stations given when VK3WJ is on the air.

VK3WJ Sundays, 0900 hours EST, simultaneously on 3750 Kc., 7195 Kc., 14342 Kc., 32.4 Mc. and 144.125 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7055 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WJ.

VK3WJ Sundays, 1000 hours SAST, on 7195 Kc. Frequency checks are given by VK3DW by arrangements only on the 7 and 14 Mc bands.

VK3WJ Sundays, 0800 hours WAST, on 7195 Kc. No frequency checks available.

VK3WJ Sundays, at 1000 hours EST, on 7195 Kc. No frequency checks are available.

contrary, that VK has the better DX conditions in several cases scores were very close, e.g., VK3UR and VK3WH, ZL1MB and ZL1BY, but the careful log checkers did not upset the placings.

"All certificates were posted before the end of January. This was rather a herculean task and I trust that no omission, etc., were made even with the cross checking of certificates and address labels. But if so I would be pleased to make any necessary repairs."

"In conclusion I would add that, by their comments, the overseas gags are awaiting with anticipation the 1957 contest so here's hoping that conditions will be a little more kind."

—Jack White, ZL3GX, Contest Manager

## Late Entries

The following late entries were received.  
C.W. OM2H 200 pts. OX17F 643 pts. PY3XK 320 pts. LA5T 45 pts. OX18M 205 pts.

Phone: VY3XK 149 points.  
Listeners: OX333 533 pts. OX333 375 pts. OX18E 233 pts. OX234 280 pts. OX280 946 pts. OX150 130 pts. HAZ7RS 285 pts.

## ALTERATIONS TO DANISH REGULATIONS

A letter of interest to readers of "Amateur Radio" has been received from O22R, Chairman of the Experimenting Danish Radio Amateurs, indicating minor, though important, changes to the regulations under which the Danish Amateurs are working as from 1st January, 1957.

In the first place, it is stated that the frequency bands are only of a temporary nature put at the disposal of the Danish Amateurs until the Radio City plan of 1967 comes into force, but the band limits are to the greatest extent possible in agreement with those agreed upon for Region I at the Paris Amateur Congress held in May 1956.

The Danish frequency bands are:—  
"Small" Licence (8 w.p.m.) Telegraphy—3500-3600 Kc. 3600-3940 Kc. 144.0-146.0 Mc. Telephone—3600-3940 Kc. 3900-3980 Kc. 3600-3940 Kc. 144.0-146.0 Mc.

"Ordinary" Licence (12 w.p.m.) Telegraphy—3500-3900 Kc. 3900-3940 Kc. (Temporary), 7000-7100 Kc. 7100-7200 Kc. (Temporary), 14000-14350 Kc. 14400-14600 Kc. (Temporary), 3600-3970 Kc. 144.0-146.0 Mc. Telephone—3600-3940 Kc. 3900-3980 Kc. 3600-3940 Kc. (Temporary), 14000-14350 Kc. 14400-14600 Kc. (Temporary), 14120-14250 Kc. 14250-14350 Kc. (Temporary), 3600-3980 Kc. 144.0-146.0 Mc.

## QUEENSLAND

President: J. H. Farrell, VK3WJ.  
Secretary: J. F. Pickles, VK3FP, Box 6387, G.P.O., Brisbane.

Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.  
Divisional Sub-Editor: Clive J. Cooke, VK4CC, Kurun Street, Chermside, Brisbane.

## SOUTH AUSTRALIA

President: E. A. Barber, VK3MD.  
Secretary: G. M. Bowen, VK3SU, Box 1234K, G.P.O., Adelaide.

Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.  
Divisional Sub-Editor: W. W. Parsons VK3PS, 10 Victoria Avenue, Rose Park.

## WESTERN AUSTRALIA

President: R. W. S. Hugo, VK3XW.  
Secretary: W. E. Coxon, VK3AG, 7 Howard St., Perth.  
Meeting Place: Padbury House, Cr. St. George's Ter. and King St., Perth.  
Meeting Night: Third Tuesday of each month.  
Divisional Sub-Editor: Alec A. Smith, VK3AS, 75 Weston St., Carlisle Western Australia.

## TASMANIA

President: J. Brown, VK3TJ.  
Secretary: R. D. O'May, VK3OM, Box 371B G.P.O., Hobart.  
Meeting Night: First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.  
Divisional Sub-Editor: B. Exsell, VK3TJ, 77 Mole St., Hobart, Tasmania.  
North Zone Correspondent: R. H. Kilby, VK3RX, 5 Galvin St., Launceston.

Input Limits: 50 watts for telephony and modulated telegraphy, 100 watts for unmodulated telegraphy.

Portable Transmitters: Within Danish territory only, on 44-146 Mc. On other bands only on special permit.

Frequency Modulation: Permitted on 144-146 Mc. band. Maximum frequency deviation plus or minus 30 Kc. All telephony bands are 50 Kc. narrow-band frequency modulation with maximum frequency deviation plus or minus 4 Kc. plus or minus 2 Kc. permitted.

Licence Examinations: Morse code 8 w.p.m. or 13 w.p.m. Technical verbal examination on recent knowledge of electro, radio and traffic technique specially applying to radio astronomy.

## FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

According to VK3RF the monophonic recorder at Macquarie Island causes intense QRM. The recorder which makes a sweep every ten minutes blows out everything on the 3RO for two minutes. The Tx used by VK3RF uses 75 watts. Personnel at Macquarie Island expect to be using 100 watts.

Cards returned from the R.E.F. indicate that FLAAG and FLAAM allegedly in French Somaliland are both phony, as is FAKB.

The manager of the R.C.A. QSL Bureau, Box 180 San Remo (Ivory), forwards some attractive printed matter on the delights of that locality.

The brochure lists events, ranging from pigeon shooting through to philatelic exhibitions scheduled to take place from December, 1956, to April, 1957. It is hoped that the R.C.A. will concentrate on the Riviera certainly will enjoy a comprehensive range of events.

Frank Jones, VK3RJ, expects to visit Australia from 2nd to 4th April, spending the first half of this period in Sydney and the last half in Melbourne. Anyone interested in meeting Felix should contact this Bureau for a suitable time and date.

Nothing further has been heard from Jack Elliott, VK3EJ, regarding his proposed visit to Australia. This was originally scheduled to take place during April, 1957.

Writer's eye was rudely shattered during the recent R.A.R.U. regatta, as had of me, owing to inability to make sense out of any sort of Morse. During said contest writer heard station to station, including CQ R.A.R.U. on many occasions but did not answer him as was

Amateur Radio, April, 1951

call sign. 3FD still without modulator. JACK partly on deck from 311Z. 3APP in Melbourne. 3ALE also in land of missing along with 3AGT. 3IK heard on hook-up. 3ALE is awaiting modulation tranny 3YV still emanating goodwill cheer, etc. from Waag; you have something to winge about Howard. Bert Brown, associate from Yes, gives you boys flattering reports according to letters I have received. Bert slightly unhappy since getting hand caught in bottling machine at work, then being nearly bowled by lightning all in the one week. You boys may receive hand pointed SWL Cards one of these days 'if' your lucky.

In closing the zone correspondent's new QTH is care of the Victory Theatre, Tatura.

#### CENTRAL WESTERN ZONE

One of the disadvantages of country life is the continuous ebb and flow of population. Since our last notes STZ has departed from Stawell to Melbourne and 3AKP is departing to Horsham. JTA has a crystal controlled converter ready for 144, so we hope something will be done about that Melbourne to zone two way contact on 144, and the three miniature tubes handed over to a permanent owner.

During the month our ex-member 3AJO pop-

ped in for probably the last time. John is on the air now from Shepparton using a Type A. He is also getting married soon, (poor chap). 3DP busy on an R.S.B. Tx on 1 Mc. but is suffering from lack of output. 3ARM after a long absence on 15 Mc. and putting out quite a nice signal has changed the antenna to an end-fed 80 metre zepp which works out OK on 40 also.

3KV rebuilt Tx with a band-switched exciter and an 813 in the final, with 100 watts modulated by a pair of 907s in A3S. Gordon puts out a beautifully modulated signal and is a pleasure to work. 3ARS is now home again, and busily engaged in his favourite sport. Anyway it is nice to see and hear him about again after his long absence. 3YV is now looking for contacts on 3.5 Mc. s.s.c., present frequency is about 2554 Kc. and the transmitter, which uses a crystal band-pass filter on 1600 Kc. for side-band suppression, runs to 35 watts input on peaks to a single 830B in class B.

As a reminder to all zone members, and other interested parties, the preliminary date for our next Convention is Sunday, 23rd September, and the place Ararat. Also don't forget there is a zone hook-up on 7150 Kc. (approx.) at 1000 hours on the second Sunday of the month.

#### SOUTH WESTERN ZONE

Your scribe has been fairly inactive this month and apparently there has not been very much activity in the zone generally, not much to my knowledge anyway. SAGV went into the state on the 12th and headed for the Blue Mountains in VEC. He took his Type 3 with him. 3AGS still active on 40 metres at all times, permits, though the picture operating keeps him busy at nights and on Saturday afternoons. 3AGD is building himself a new shack. Haven't heard much of 3H this month except on the emergency net. 3ADN very quiet of late. XYL must have put the axe through the rig.

We did like to bring to the notice of all South Western Zone members that there is still a zone hook-up on 80 metres at 2100 the first Sunday of every month. Last hook-up (4/3/51) was a total waste of time as no one showed up. It was bad, but because a lot apparently did not try and get on.

3YV is leaving the district and going back to Melbourne. The Geelong gang will be sorry to lose him. 3AIC has built up a two stage rig using 384s with the idea of taking it portable. 3IC playing about with an ATV and has built up a new power supply for it, also has altered his relay system. 3SU shortly putting up poles at Black St Barrow Heads. 3ALG has his TA1ED (150 watts) perking and running. 3AJP and 3APG were heard on the band during the month. 3AJP was using a HC18B. 3BW also heard on 40 metres using his TX. 3AJT and 3ABE working phone DX on 20 metres. 3AOL having trouble with his Rx and modulator.

#### GEELONG AMATEUR RADIO CLUB

There was a good attendance of members at the new club rooms, where 3BU provided the syllabus for the evening, films, which included 3BW erecting rotary beacons. There were 18 members were present, the President again presided over the meeting. The new club rooms more comfortable than the previous ones. The lecturer on this occasion was 3BY whose subject was "Speech Equipment" as applied to broadcast transmitters, a lecture which proved most interesting to members. Jack certainly knew his subject.

Recently the boys got together and pulled down the dome antenna in adverse weather conditions and erected it at the new location. For intending members, the location is two doors up the hill from the Post Office in Gheringhap Street in a room at the back of the building.

#### EASTERN ZONE

The chief item of interest this month is that after a hook-up lasting 2 1/2 hours and that the next Eastern Zone Convention will be held at Warragul, on the 3rd and 4th of November, 1951. 3AKV is doing the necessary arranging—the poor chap doesn't know what he has let himself in for, hi!

Sale Radio Club's April meeting will be held on Tuesday, 10th April, at Maffra, at the QTH of 3SS. Club President, 3ABP, has invested in some large transients, etc., for the new rig. 3ABP active on 40 phone between flights. 3APG not heard lately. 3AFA pounding the brylcon on 40. Wealthy sheep man, 3IO, busy counting the takings—that'll make him bite! 3QZ and 3PR handled some emergency traffic for the "Glory Without Power" boys—E.C.C. to you when phone and power lines were out during February storms.

3PR claims he is not receiving sufficient publicity in these notes—some people are never satisfied. 3TH left his tractor out one night and in the morning it had disappeared, except for the top of the exhaust pipe—the result of a cloud burst up the river. 3RH, 3VL, 3US, 3DI and 3TH with occasional assistance from 3QZ, active on 50 Mc. 3RK on the hook-up with 5 Mc. No sign of 3AEP for ages. 3ALA's Rx is on the fire, stay home from the movies and fix it, Teddy.

3SS expects his new assistant to arrive from England about 1st April. Keith's new shop almost completed now. 3WE counting awhile. 3GO should be on the air again soon—when he moves into new quarters. New Ham here is 3ASE at East Sale drone. 3ZJ announcing at regional 321. There are now four Hams there. 3GO, 3LY, 3VG and 3ZJ—must be nearly a record.

#### QUEENSLAND

It was with deep and sincere regret that we heard of the decease of eldest member Ken Collins who, until his untimely passing, had not only been making good progress in the attainment of his transients licence but was also very active as a registered short-wave listener in which capacity Ken received cards from Ham throughout the world. As many of you are aware, Ken's death can be attributed to the extensive war injuries he sustained whilst serving in the Navy during World War



For the first time since our Magazine returned to print an active member of the Magazine Committee has taken unto himself a wife. Pictured above is your Circulation Manager, Ian Sewell (VK3IK), and his charming bride, Lynette. With her assistance we are sure the circulation will be absolutely correct in future.

**UCC**

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some schedules for 6 metres, but as yet there is nothing doing. Both ways. QRC can be heard in Broken Hill, but 20T has yet to break through.

## WESTERN AUSTRALIA

The February meeting was held in the Institute of Mines, Perth, on the 20th. The attendance was large, but could have been a lot better. The weather no doubt kept many away. It being very hot and oppressive after a particularly hot day. However, the meeting all pleased to see three visitors present, namely, EMU (Merredin), EDW (Bruce Rock), and JHC (Geraldton). The latter had only arrived in VK6 the previous day by Interstate bus, and planned to stay three or four weeks. By the time these notes are printed, EMU will be back home, but we can trust you thoroughly enjoyed your holiday OM, and hope to hear from you on the air.

EDW has also been on holidays, giving six metres a rest. I believe Don did extra well in the Ross A. Hull V.E.F. Contest, and it wouldn't surprise me at all if one of the prizes comes to him.

The meeting was the closing time for nominations for the 1951 Council, but according to the Secretary only nine were received, a very poor return indeed from 143 pages distributed. It is to be hoped that the ballot papers receive more attention from members.

Conference in Amateur bands came up for a good deal of discussion once again, 7 megacycles of course being the main bone of contention. I have heard that some of the RLUs' feelings on this subject but much as I hate to admit it, I'm afraid ours is a voice in the wilderness, and I'm much concerned to be heard as it is with amateur signal underneath some of those high power h.c. stations on 7 Mc. EMU had, unfortunately, overlooked the closing date for his intended lecture on A.J. Unfortunately the subject of the lecture had to be changed at the last moment, because the amateur band was not to be discussed, and I think Wally left it home at Darlington. However a good radio man is always resourceful and from out of nowhere Wally produced a "vibrating" sound which sounded very good, bad, and indifferent. These were all tested using the c.r. tube, the results of each test being noted and the discussion was almost over. It became a general discussion of different c.r. tubes, their merits and de-merits, etc. Various members joined in the discussion and it became quite interesting. I'm sure no one missed that audio amplifier of yours Wally.

After the usual ragchew the meeting closed about 10.40 p.m. The next meeting (March) is the Annual General Meeting and very few notes appear in print the new Council will be in office, all set with their new brooms and ready to sweep the floor. I have heard that wherever they may be, here's the very best of wishes for 1951-52, a most successful year in office.

## PERSONALITIES

I am indebted to 6WZ, of Geraldton, for the following items of news concerning the gang up there: Thanks Harry. From Geraldton comes this: "The weather is almost normal. Radio there is almost at a standstill. 6EL is engaged in building a "ute" body for his new trailer, never goes on the air. 6G who is still waiting for a new set is almost around the point of doing something desperate (a couple of 10's in p.p. with 45 volts h.f.) just now. 6H is a bit of a trouble maker, but once again; is about 18 months since Cyril last sent out a signal. 6HJ amended everyone (including himself) coming on the air. 6K is a Sunday or two-a-go only stays for a QSO then had to chop some wood; very shortly he is about to descend into the same state as 6WZ. 6L is a bit of a trouble maker. Geraldton making any sort of noise at all—and that's an average of about one QSO per week on average. 6M is a bit of a trouble maker away three stages of 100 Kc. I.f. for "double converger" effort. He says everything seems to be "converging" at the centre of the 7 Mc. band—just as it should be. 6N is a bit of a trouble maker. 6RT who more or less belongs to the "Geraldton Zone"—there being no "Cue Zone" at Geraldton—has been away for the last annual holidays at the northern port and having spent some time on visits to the 6WZ shack. He is just as puzzled as Harry over the performance of some of the new gear. He is back to Cue with four UBLs determined to lick those d.c. mains or else!

It is rumoured that 6RU did exceptionally well in the last V.E.F. Contest. Two competitive strangers turned up to the February meeting. 6IG whom we had not seen for at least a year, and 6G3 who put in an appearance after a lengthy absence. How the latter is micro fine progressing Jack? 6AP, whose job keeps him up till midnight, changes the DX in the small hours of the night. He has heard nearly all other VKs are abed. I don't think there is a 2S who doesn't know Alf. 6HC and 6WT left on schedule for VK3 and VK1. They were heard from Norseman emitting very solid signal into Perth.

6GIA has been worked from Forrest. I understand Bill will be seeing plenty of Forrest and vice-versa. Very soon, however, the 3-year term had turned into a three year affair. Is that right Bill? Better get plenty of Ham gear up there. OM and let's hear from you.

If other VKs are spending so much time on the air as what I am, then activity must be at an all time low. One QSO per fortnight is my average these days. Haven't yet reached the bottom of that auspicious cycle yet!

## TASMANIA

There is very little of interest to report this month, band conditions have not been the best and, apart from a few, very few have been in cross town QSOs. Inactivity was prominent during the month of February. An apology must be made to the Tasmanian members covering our annual institute dinner held at Hobart on 2nd March. Full details will be included in the next issue.

From TK, it is learnt the new transmitter is due for its first test and from what can be ascertained will be capable of between 80-100 watts. Parallel 80's are the final amplifiers. Don, during the last few weeks, has enjoyed the thrills and spills of speed boat racing, but has returned to radio, even with the new sales tax. Don has a few more ideas of his own hobby after all. Believe a beam is eminent at TRX, the type planned is the two element type and, knowing Keith as we do, should be a wonder. From TK, it is learnt that TRX and TRX regarding signal reports on 20 metres favoured Rupe in a recent check with a VK3. Much to the delight of TRX. Heard since his recent modulation trouble is TLD and from his transmissions of late appears to have completely overcome the trouble.

Disappointed to hear prior to our general meeting that no members would be likely from the Launceston Zone. North Western Zone will be well represented by VAB, TKB, etc. Met our friends from the Launceston Zone, and the source of income and as most know is resident at Opossum Bay. Ted up until now has not been active from the new QTH; plans are in hand for future improvement to the new set so in future more will be heard from this area. Heard TCT in contact with TWI one recent Sunday with reasonable strength, but was having local QRM troubles which made reception difficult; glad to hear you again Terry. Another country member seen in Hobart collecting your wood cheque (Jody?) well, J.A. sec. is using a radio store and appeared interested in a "750" Eddystone receiver. Trust we will see you at the next meeting.

News is to hand of the illness of 3ARL, whom needs little introduction to VK7 Hams. Prior to his departure to the mainland the call was 3DL and was a very active member of the Division. Sorry to hear of your bad luck Lin and it is the hope of all that a speedy recovery will be made. From the north the most solid signal heard from the north was from 6HJ, sounded f.b. except for a trace of hum on the transmission. JLD now purchased a new microphone and a new set of headphones, both 100 metres. Trouble in gaining sufficient grid drive to his 144 Mc. Tx is being experienced by TMY, which has stopped temporarily the automatic transmission. Jody is still active in the recent few weeks. Seen in town since his return, looking f.b. is TSK. Believe his new hobby is photographing. Heard from 6HJ, who managed to take some interesting shot especially of his hot 20X.

B.C.I. worries now being experienced by TSD although the latter does not appear to have the matter well in hand. Bad luck Don, was surprised to hear 7CP in contact with TWI and signals heard were 50. Must be the new localisation of the 7CP. Heard from 6HJ in the future. TGB heard also on 40 working DX on c.w. Ted is unfortunate in he does not enjoy staying in the Launceston Zone, but meetings owing to his nature of his employment. Visiting the mainland in the recent month is TGA now comfortably installed in the new house at Bay home. Heard from 6HJ, who enjoys home building, but still manages to enjoy a QSO during the week-ends.

## NORTHERN ZONE

As each month goes by I continue to be amazed at our good luck in the Northern Zone. So many willing persons who are ready to provide entertainment and instruction for us at our meetings. We have had over the last year or so a great number of able lecturers on subjects as far apart as meteorology and recordings and embracing many aspects of radio, and we have provided for them, their own specialised education and the whole adding up to something that would be credit to an organisation much larger than our zone. Most of our members are very busy, but those who are not I would suggest you just stop and think of what we have had and hope to get, try to make the most of it, and if you can, try to get it has gone into those lectures and then appreciate the fact that this W.I.A. of ours is something really worth working for.

Our February meeting provided a somewhat unusual evening and one that must surely be recorded among the top liners. A film evening was arranged and after a good deal of last-minute headaches a most enjoyable selection of visual aids was provided. The first of the films obtained. Our most hearty thanks are due to Mr. Carl Crawford for so very willingly providing the projector and associated equipment and for giving up his time to show the films.

Movement once more seems to be in the air here and it seems as though every time someone is about to give up, someone else comes along. It's TFF and Peter, after having joined D.C.A. has been transferred to VK3. Bad luck for the zone but we hope good luck for you Peter and the best wishes of all go with you. Now you'll be able to be the first to be on both ends of a VK3-VK1 144 Mc. QSO. TDS is now also with D.C.A. now you should be able to feel safe when we travel the skyways.

Got a new country out of the mail box recently which made 80 per cent. on 140 countries. Don, during the last few weeks, has enjoyed the thrills and spills of speed boat racing, but has returned to radio, even with the new sales tax. Don has a few more ideas of his own hobby after all. Believe a beam is eminent at TRX, the type planned is the two element type and, knowing Keith as we do, should be a wonder. From TK, it is learnt that TRX and TRX regarding signal reports on 20 metres favoured Rupe in a recent check with a VK3. Much to the delight of TRX. Heard since his recent modulation trouble is TLD and from his transmissions of late appears to have completely overcome the trouble.

A big blow recently occurred for at least two of our members, as a 144 Mc. rig and a 144 Mc. once more from T.A.M. for the rest of the crowd, unless I turn Dorothy Dix I cannot write of their doings so it's time to record the results of the 144 Mc. rig scheduled for Friday 13th and, as last year, a liberal supply of robbers' feet will be obtainable at small cost.

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